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Alternatives for an international climate regime?

The Economics and Politics of Climate Change

Dieter Helm and Cameron Hepburn (Eds.); Oxford University Press, Oxford, UK, 2009, 538 pp, £30, ISBN 978 0 19 957328 8

Reviewed by Axel Michaelowa*

Center for Comparative and International Studies, Political Economy of Development, Institute of Political Science, University of Zurich, Affolternstrasse 56, 8050 Zurich, Switzerland

Mainstream economists – probably best embodied by William Nordhaus – often see climate change as an issue that, at best, warrants some low-level carbon taxes. Moreover due to the public good character of GHG emissions mitigation, any international climate policy regime that goes beyond business-as-usual is seen as elusive. Dieter Helm and Cameron Hepburn from the University of Oxford bring together 22 contributions that mainly follow this argumentation. As with so many edited volumes, the quality of chapters varies considerably. Although some enrich the literature, others are little less than ideological position papers. The ideological starting point of the endeavour becomes clear even in the introduction, with Helm and Hepburn intending to show ‘why so little has yet been achieved’ (p. 1) as global emissions ‘just keep going up’ (p. 4). In their view, this is due to mitigation costs that are higher than originally thought, pervasive rent seeking, problems with enforcement of obligations and eventually the sheer complexity of the climate policy regime. They want to do away with the ‘promise of a relatively cheap transition to a low-carbon economy that has seduced politicians into avoiding the very hard issues’ (p. 4).

The book consists of five major parts. The first, ‘Revisiting the economics of climate change’, brings together six contributions of a generic nature. Dieter Helm sets out by criticizing climate policy for its limited achievements. He singles out the Kyoto Protocol for a scathing criticism that in my view is undeserved, as the creators of the Protocol never thought it could solve the climate change issue. The Protocol was just seen as a tiny first step towards this aim. None of Helm’s criticisms of the Protocol goes beyond the standard arguments of neoclassical economists. In this

context, it is surprising that he favours a consumption-based allocation of emissions allowances. A detailed critique of the Stern Report’s mitigation cost estimates is essentially based on a distrust of bottom-up estimates of mitigation potential. Helm flatly dismisses that energy efficiency improvements have a relevant mitigation potential and argues that Stern’s discount rates are too low. Nevertheless, he avoids providing an alternative mitigation cost estimate. It is bewildering that the chapter ends with a call to remove some elements of national sovereignty in order to set up a new international institution to deal with climate policy.

Hepburn and Stern provide a good overview about international climate policy, with valuable sections on the role of public opinion and the political economy of large financial transfers. They also summarize the role of carbon prices, CDM reform, technology policy, avoided deforestation and adaptation finance. Barrett provides well-rehearsed game-theory arguments about why a global climate policy regime is unenforceable. In his view, the Montreal Protocol cannot serve as an example for climate policy as it addressed a problem for which a relatively cheap technical solution was readily available. His counterintuitive argument to break climate policy into many small pieces by unravelling the basket of Kyoto gases and replacing Kyoto with sectoral agreements is unfortunately not underpinned by specific reasons other than the political potential to apply different pressure points. In my view, a global approach perfectly allows ‘logrolling’ and thus should be favoured over a disaggregated solution.

Garnaut et al. give a lucid account of why higher rates of emissions continue to increase in advanced developing

countries compared to the estimates from the scenario exercise underlying IPCC projections. In a very data-rich exercise, they show that economic growth was higher than expected, energy efficiency improvements tapered off, and coal shares increased. They explain that the financial crisis of 2008 has not altered these factors to any relevant extent.

Brekke and Johansson-Stenman discuss the behavioural economics of climate change but apparently forget that the key behavioural items influencing emissions are consumption choices. Their chapter concentrates on the choice of discount rates and how fairness of negotiation outcomes is perceived. They introduce the notion of 'self-serving bias' which is a useful metric for reading the chapters in Part II.

Part II, on 'Global players and agreements', discusses the climate policy positions of China, India, the US and the EU, together with an assessment of climate change issues relating to Africa. As is often the case, some of these articles are apologetic regarding their home country's negotiation position. Collier et al. describe the challenges to adaptation and mitigation in Africa but remain rather generic. Their discussion of adaptation does not provide a single reference to the rich body of adaptation literature, whereas the discussion of the CDM in the chapter's mitigation section ignores the existing CDM rules.

Pan et al. estimate the emissions embodied in Chinese export products at 1.7 billion tonnes CO₂e, with the clear aim of allocating those emissions to the importing countries. This is a case of 'self-serving bias'. Given that China handsomely benefits from its exports, there is no intrinsic reason that the responsibility for the emissions should not belong to China. Pan et al. use an input-output table of 2002, assuming that the emissions intensity of exports is equivalent to domestic production. However, in my view, given that export goods are normally of higher quality, it is likely that they have a lower emissions intensity than domestic products. This would mean that the estimate seems to be somewhat on the high side.

Joshi and Patel discuss global burden sharing for mitigation, and argue that geological carbon capture and storage (CCS) is prohibitively expensive. Unfortunately, their chapter neither discusses the negotiation position of the Indian government nor the emerging domestic policy instruments.

Stavins proposes a blueprint for a US emissions trading system. Incredibly, he favours borrowing and a price cap, without specifying how the resulting incentive problems can be resolved. To bring emitters on board, he proposes free allocation of 50% of allowances.

Helm concludes this section with a series of mostly unsubstantiated statements about EU climate policy. EU climate policy would not have made 'as much as one part per million difference' (p. 223) and 'rhetoric, the plethora of initiatives, directives and intervention has not been matched by outcomes' (p. 223). Key issues where Helm is off the mark include support of CCS, where the EU has consistently played a much more active role than the US. In contrast to the botched Future Gen project in the US, within the EU the first CCS pilots are operational. Levels of floor and cap prices for emissions trading are notoriously difficult to set and essentially make emissions trading a form of carbon tax. Helm does not like trading schemes because of a purely theoretical argument about the slope of the marginal cost curve.

Part III, 'Low carbon technologies', discusses nuclear power, CCS, renewables, geoengineering and the economics of energy efficiency. Helm addresses the role of nuclear power in energy policy and gives a good summary of its history, while dismissing concerns about nuclear fuel availability and decommissioning costs. In his view, sunk costs necessitate fixed-price electricity sales contracts for nuclear power operators. Herzog provides a solid assessment of CCS costs and technical challenges with the only drawback of focusing a bit too much on the US situation. Green discusses the mitigation potential of renewable energy in the UK, but, unfortunately, the ample experiences with renewable energy outside the UK are sidelined. Andersson et al. provide an initial insight into forestry inventory issues, but their chapter would have benefitted from a more detailed treatment of the critical issues of those inventories.

Victor's chapter on geoengineering is a highlight of the book. Written in captivating style, Victor covers a wide range of literature on the unpleasant, but fascinating 'geoengineering cocktail' that might replace classical mitigation in the case of non-performance. The notion of cheap geoengineering would not stand the test of implementation. He stresses that once 'masking' geoengineering has begun, policy makers are doomed to continue it as failure would lead to a massive pulse of warming. Moreover, one country can act unilaterally. Thus, it is important to fight against a taboo of geoengineering and to start a highly transparent geoengineering research programme including pilot projects to explore the safest and most effective options, 'while socializing a community of responsible geoengineers' (p. 328). One issue this reviewer has with Victor's chapter is his mistrust regarding the IPCC's ability to provide assessment of geoengineering options. As the IPCC was able to assess the controversial topic of CCS in 2005, why should it be unable to assess geoengineering?

Sorrell discusses the hidden costs of energy efficiency measures and shows his superb knowledge of current research about the rebound effect that reduces the volume of emissions decreases due to energy efficiency improvements. He concludes that rebound effects are non-trivial, which raises 'some concerns about whether energy consumption can be significantly decoupled from economic growth' (p. 341).

Part IV, on 'National and international instruments', has limited coverage. In addition to a comparison of carbon taxes and emissions trading and a critique of the CDM, it features only an NGO proposal for a new form of funding of mitigation in developing countries. Hepburn starts with a solid, but standard discussion on the interaction between emissions taxes and emissions trading that is useful for the beginner in climate policy. His tendency to favour carbon taxation is not underpinned by empirical evidence. Wagner et al. describe the Environmental Defense Fund's idea of 'clean investment budgets', essentially an allocation of emissions allowances to developing countries with an initial element of 'hot air'. Hepburn then evaluates the performance of the CDM. While conceding that it is one of the success stories of the Kyoto regime, he does not see the CDM as being capable of being upscaled by an order of magnitude in order to meet post-2012 demand. A large emphasis is on CDM rents for project developers in host countries, which Hepburn sees as excessive, proposing the alternative of a multilateral fund to pay just the marginal abatement costs. A good discussion of CDM reform options follows.

Part V, on institutional architecture, contains two chapters on the current UNFCCC regime and analogies from other multilateral regimes. Depledge and Yamin argue that the UNFCCC has been crucial to gathering momentum for climate policy, enabling complex reciprocal deals and serving as a forum for learning. The reporting and review system is seen as a major strength, whereas the North-South conflict is seen as the key weakness. A further increase in complexity and a lack of simple decision-making structures are further challenges. Depledge and Yamin propose discarding the rigid Annex structure to create smaller decision-making groups. Their aim is to create a permanent 'International Climate Change Organization' that 'may not be the most rational setting in theory' (p. 452), but is argued as a political necessity.

Ghosh and Woods discuss how direct incentives could be set to ensure participation, what monitoring should look like, and how enforcement of emissions commitments could be decentralized.

This reviewer agrees with the editors that climate crises might be a precondition in order to achieve a real breakthrough in international climate policy. However, I disagree that the UNFCCC regime has achieved only very little. The first application of a global market mechanism, the universal raising of awareness on climate change and the nurturing of emissions mitigation industries are no mean feats. If we build on those achievements and heed some of the lessons brought together in Helm and Hepburn's volume, international climate policy would move forward substantially.